AMENDMENTS TO THE SPECIFICATION

Please amend the abstract as follows:

~~One embodiment of the present invention provides a~~ A system that solves a global inequality constrained optimization problem specified by a function f and a set of inequality constraints $p_i(\mathbf{x}) \leq 0$ $(i=1,...,m)$, wherein f and p_i are scalar functions of a vector $\mathbf{x} = (x_1, x_2, x_3, ... x_n)$. ~~During operation, the~~ The system ~~receives a representation of the function f and the set of inequality constraints, and stores the representation in a memory within the computer system. Next, the system~~ performs an interval inequality constrained global optimization process to compute guaranteed bounds on a globally minimum value of the function $f(\mathbf{x})$ subject to the set of inequality constraints. ~~During this process, the~~ The system applies term consistency and box consistency to a set of relations associated with the global inequality constrained optimization problem over a subbox **X**, and excludes any portion of the subbox **X** that violates the set of relations. ~~The system also applies box consistency to the set of relations, and excludes any portion of the subbox **X** that violates the set of relations.~~ The system also performs an interval Newton step on the subbox **X** to produce a resulting subbox **Y**. The system integrates the sub-parts of the process with branch tests designed to increase the overall speed of the process.

Please amend the paragraph starting on page 1, line 19 as follows:

The subject matter of this application is related to the subject matter in a co-pending non-provisional application by the same inventors as the instant application entitled, "Applying Term Consistency to an Inequality Constrained Interval Global Optimization Problem," having serial number ~~TO BE ASSIGNED~~ 10/017,574, and filing date 13 December 2001 ~~(Attorney Docket No. SUN-P6446-SPL)~~.